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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,737	12/03/2003	Igor K. Kotliar	IKK-19	5831

7590 05/18/2006

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EXAMINER

GANEY, STEVEN J

ART UNIT	PAPER NUMBER
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3752

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	10/726,737	KOTLIAR, IGOR K.	
	Examiner	Art Unit	
	Steven J. Ganey	3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-45 is/are pending in the application.
- 4a) Of the above claim(s) 23, 34, 42, 44 and 45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-22, 24-33, 35-41 and 43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10/27/04, 12/20/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Receipt is acknowledged of the amendment filed on December 15, 2006, which has been fully considered in this action.

Election/Restrictions

2. Claims 23, 34, 42, 44 and 45 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on December 15, 2005.
3. Applicant's election without traverse of claims 16-22, 24-33, 35-41 and 43 in the reply filed on December 15, 2005 is acknowledged.

Claim Objections

4. Claim 29 is objected to because of the following informalities: In claim 29, line 1, the numeral "16" should be changed to --28-- in order to provide proper claim dependency, also since a duplicate claim has already been provided in claim 26 to depend from claim 16. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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6. Claims 16-22, 24-33, 35-39, 41 and 43 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 16, lines 10 and 11, the limitation “the range from greater than 9% to approximately 16% of oxygen” has not been disclosed in the specification including the upper range of approximately 16% for the fuel tank as claimed and is considered new matter. The specification on page 7, lines 13-15, only discloses a range of 8-12% being constantly supplied into the fuel tanks. The range up “to approximately 16%”, is beyond the scope of the invention since it would include percentages from above 12 to below 16 percent. Also, as originally presented in the claims filed December 3, 2003, the claims recited the oxygen-depleted gas mixture being constantly supplied into fuel tanks for maintaining the hypoxic environment in order to prevent a fuel ignition, where the oxygen content in the environment is maintained below 12% and, preferably, at 10%.

In claim 28, lines 10-13, the limitation “maintained above 9% and below 16%” has not been disclosed in the specification including the upper range of below 16% for the fuel tank as claimed and is considered new matter. The specification on page 7, lines 13-15, only discloses a range of 8-12% being constantly supplied into the fuel tanks. The range up “and below 16%”, is beyond the scope of the invention since it would include percentages from above 12 to below 16 percent. Also, as originally presented in the claims filed December 3, 2003, the claims recited the oxygen-depleted gas mixture being constantly supplied into fuel tanks for maintaining the

hypoxic environment in order to prevent a fuel ignition, where the oxygen content in the environment is maintained below 12% and, preferably, at 10%.

In claim 38, line 10, the limitation reciting the oxygen content in the hypoxic air propelling the water mist being below 16%, has not been disclosed in the specification including the range from above 15% to below 16% for the oxygen content in the hypoxic air propelling the water mist as claimed and is considered new matter. The specification on page 11, lines 10-12, only discloses a range of 8-15% and as low as 1-8% in special applications. The broad recitation of below 16%” is beyond the scope of the invention since it would include percentages from above 15% to below 16 %, which is not disclosed.

In claim 39, line 10, the limitation reciting the oxygen content in the hypoxic air propelling the water mist being below 16%, has not been disclosed in the specification including the range from above 15% to below 16% for the oxygen content in the hypoxic air propelling the water mist as claimed and is considered new matter. The specification on page 11, lines 10-12, only discloses a range of 8-15% and as low as 1-8% in special applications. The broad recitation of below 16%” is beyond the scope of the invention since it would include percentages from above 15% to below 16 %, which is not disclosed.

In claim 41, line 3, the limitation reciting the oxygen content in the hypoxic air/water mist mixture being below 16%, has not been disclosed in the specification including the range from above 15% to below 16% for the oxygen content in the hypoxic air/water mist mixture as claimed and is considered new matter. The specification on page 11, lines 10-12, only discloses a range of 8-15% and as low as 1-8% in special applications. The broad recitation of below 16%” is beyond the scope of the invention since it would include percentages from above 15% to

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below 16 %, which is not disclosed. This is further supported by the limitation in dependent claim 43 which provides the supported disclosed range of 1-15%.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 16-22, 24-33, 35-41 and 43 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 16, lines 8 and 9, the phrase "said fuel tanks" lacks antecedent basis. Only a single "a fuel tank" has been recited in line 2.

In claim 20, line 2, the step "the mixing of said oxygen-depleted gas mixture with said bleed air" lacks antecedent basis since no such mixing step has been provided in claim 16.

In claim 20, line 3, "the cabin" and "different compartments" lack antecedent basis and raise double inclusion issues since it is not clear if these limitations are the same or different from the "human occupied compartment" recited in lines 2 and 3 of claim 16

In claim 20, lines 6 and 7, "the protected compartment" and "the compartment" lack antecedent basis and raise double inclusion issues since it is not clear if these limitations are the same or different from the "human occupied compartment" recited in lines 2 and 3 of claim 16.

In claim 21, line 2, "protected compartment" raises double inclusion issues since it is not clear if this limitation is the same or is different from the "human occupied compartment" recited in lines 2 and 3 of claim 16.

In claim 22, line 3, “the protected compartment” lacks antecedent basis and raises double inclusion issues since it is not clear if this limitation is the same or different from the “human occupied compartment” recited in lines 2 and 3 of claim 16.

In claim 26, line 3, “the passenger cabin” lacks antecedent basis and raises double inclusion issues since it is not clear if this limitation is the same or different from the “human occupied compartment” recited in lines 2 and 3 of claim 16.

In claim 28, line 10, the phrase “said fuel tanks” lacks antecedent basis. Only a single “a fuel tank” has been recited in line 3.

In claim 29, line 3, “the passenger cabin” lacks antecedent basis and raises double inclusion issues since it is not clear if this limitation is the same or different from the “at least human occupied compartment” recited in lines 3 and 4 of claim 28.

In claim 30, lines 3-5, 8 and 9, “the cabin”, “different compartments” and “at least one compartment” and “the protected compartments” lack antecedent basis and raise double inclusion issues since it is not clear if these limitations are the same or different from the “at least human occupied compartment” recited in lines 3 and 4 of claim 28.

In claim 31, line 2, “protected compartment” and “the compartment” lack antecedent basis and raise double inclusion issues since it is not clear if these limitations are the same or different from the “at least human occupied compartment” recited in lines 3 and 4 of claim 28.

In claim 33, line 3, “the protected compartment” lacks antecedent basis and raises double inclusion issues since it is not clear if this limitation is the same or different from the “at least one human occupied compartment” recited in lines 3 and 4 of claim 28.

In claim 38, line 10, the limitation “below 16%” is indefinite and beyond the scope of the invention. When looking to the specification a range of only 1-15% is disclosed and therefore it is not clear how to interpret below 16% since this includes above 15% to below 16% which is not supported for hypoxic air propelling water.

In claim 39, line 10, the limitation “below 16%” is indefinite and beyond the scope of the invention. When looking to the specification a range of only 1-15% is disclosed and therefore it is not clear how to interpret below 16% since this includes above 15% to below 16% which is not supported for hypoxic air propelling water.

In claim 40, lines 3 and 6, “the protected space” lacks antecedent basis and it is not clear if this limitation is the same or different from those recited in the preamble.

In claim 41, line 3, the limitation “below 16%” is indefinite and beyond the scope of the invention. When looking to the specification a range of only 1-15% is disclosed and therefore it is not clear how to interpret below 16% since this includes above 15% to below 16% which is not supported for hypoxic air propelling water.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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10. Claims 16-19, 21, 24, 25, 28, 31, 32, 35, 36 and 40 are rejected under 35 U.S.C. 102(e) as being anticipated by Crome.

Crome discloses a method and apparatus for providing comprehensive fire prevention and suppression in an aircraft, comprising separating bleed air from source 100 using parallel air separation devices 130/140 and 170/180/190 into oxygen-enriched/first gas mixture and oxygen-depleted/second gas mixture and supplying the oxygen-depleted/second mixture to the fuel tanks with a range of up to 12%. As to removing the oxygen-enriched gas mixture/means for releasing, see col. 2, lines 12-15.

As to claim 17, note cargo compartment 330 being fed oxygen-depleted/second gas mixture through valves 250/290.

As to claim 18, see col. 6, lines 29-36.

As to claims 25 and 36, see col. 5, lines 5-16, 30-32 and 37-50.

11. Claims 38, 39, 41 and 43 are rejected under 35 U.S.C. 102(e) as being anticipated by Lessi et al.

Lessi et al discloses a method and system for extinguishing fires using water mist propelled by hypoxic air, note specifically air-separation device 6 providing hypoxic air; water tank 20; and water mist generating nozzle, see col. 3, lines 21-24. Note the oxygen content is between 9 and 12%, see col. 3, line 11.

Response to Arguments

12. Applicant's arguments with respect to claims have been considered but are moot in view of the new grounds of rejection.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven J. Ganey whose telephone number is 571-272-4899. The examiner can normally be reached on 7:00-5:00; M,Tu, W and Th.

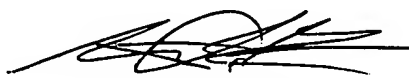
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Scherbel can be reached on 571-272-4919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven J. Ganey
Primary Examiner
Art Unit 3752

sjg
3/20/06



STEVEN J. GANEY
PRIMARY EXAMINER
3/20/06